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HOW SHALL WE TEACH GEOGRAPHY?

II.

NEED OF A PREPARATORY COURSE.

IN the January number we gave outlines of a course of study in Geography, which we believe to be the only philosophic one. That course included three separate grades—the Perceptive, the Analytic, and the Synthetic, the work of each being of a different character from that of the others, and having an entirely different object. The work of the Perceptive grade was mainly to become acquainted with the, so to speak, *mechanism* of the earth, and was to be conducted by the examination of a globe as its most perfect representation, and of maps of the continents as convenient representations, on a larger scale, of its several great members.

Undoubtedly all will admit that the only value of globes or maps, as a means of study, consists in the fact that they are symbols of what actually exists upon the earth—that they *represent* the earth, or portions of it, in regard to form, character, and the position, both relative and absolute, of its parts.

If therefore a globe or map can create in the mind of the pupil no image of the earth, or of the portion of the earth which it represents, but is to him simply a ball or a sheet of paper with certain lines and colors upon it to which certain names are attached, then it has no longer any value as a representative object, and so far as practical results in the study of geography are concerned, might as well be dispensed with, and the pupils be taught, as some of us were in childhood, simply to repeat lists of names, headed rivers, mountains, islands, seas, etc. For of what value can it be to a child to know that a certain line on the map is called a river or a mountain range, if he has no correct notion of what a river or mountain range really is? or, that a certain portion of the map is called England, and a certain point within it London, if he does not see behind the map the beautiful country itself, with its farms, its mines, its great cities and busy villages; and the vast metropolis with its trade and manufactures, its crowds of busy people, its palaces, its gardens, even its fogs—whatever distinguishes it from any other great city?

In order to secure the requisite results from the use of a map, we must give it life and significance, so that when the eye rests upon certain signs there shall start into view a great mountain wall in all its grandeur, with its accessory slopes, and its rivers like silver bands uniting them; or certain other signs shall spread out a broad landscape with dark forests, green pastures, and fields of golden grain, and lakes white with the sails of commerce. The child must first be made acquainted with *nature* as it exists under different conditions of surface, climate, and culture; in other words, he must first know the *thing to be symbolized.* Then the *symbol* will have a value, and not till then.

For this reason the course heretofore delineated should be preceded by an introductory course, the purpose of which shall be by means of a series of simple conver-

sational lessons, to form in the mind a vivid *picture* of whatever is most characteristic of the great physical regions of the globe: that is, to give to the mind of the child, in regard to each, as nearly as possible, what he would receive by seeing with his own eyes the region in question. These lessons, followed by maps in which the child learns the appropriate symbol for the reality he has been studying, and sees the countries through which his imaginary journey has led him, in their comparative size and relative position, will give to him the correct appreciation of the nature and use of a map, and enable it to become to his mind, in his future study, a source of knowledge which it could have become in no other way. Having made acquaintance with a type of each of the great strongly-marked physical regions of the earth, and learned the manner of representing it upon the map, he is now prepared to read the map itself, and seeing the actual country it represents spread out before him on a smaller scale, learn for himself all the map contains just as perfectly and easily as, having learned the alphabet, he masters the contents of a printed page.

GENERAL PLAN OF PREPARATORY COURSE.

These lessons should commence with what is most familiar to the child—his own locality—as that is within his range of observation, and possesses features that can be made use of in building up the images of remote regions. When he has learned all it is able to teach him, he may, under the direction of his teacher, construct a simple map of the neighborhood, showing the position of every object he has been studying. A map so constructed will never fail to call up a complete picture of the region it represents. The child has thus taken his first step in geographical study; he has made an intimate acquaintance with a portion of the earth's surface, and has formed a symbol by which it can always be recalled, as vividly as the face of a friend by a portrait.

He may now proceed, step by step, to form acquaintance with the characteristic regions of his own country. This is done by an imaginary journey, in the course of which whatever would most strike his attention in traveling should be presented in the order in which it occurs, in a vivid and picturesque description, yet in such language as he can most perfectly comprehend. Care should be taken to notice only the striking features of the picture, as too great minutia of detail would impair its distinctions and weaken its impression. Throughout these journeys the position of the region under discussion in regard to the child's home, must be kept in mind. Thus, at the beginning of each lesson the pupils might be asked to point or walk toward the places of which they have learned, and to state in what direction they are from the place in which the lessons are given. At the end of the lessons on the United States, a map of the whole country showing the various regions traversed in their relative size and position, accompanied by a rapid review of the main points noticed, will fix in the memory all that is needed, and make the map a vivid symbol of the reality. After this is done, the lessons can be extended in the same manner to other countries and continents, noticing of course only what is most characteristic of each of these. Thus in England we have the beauty of the landscape, owing to high culture, the commercial and manufacturing industry of London and Manchester; in France the vintage, and silk manufacture —Paris and Lyons; in Switzerland the snow-crowned Alps, the beautiful mountain lakes, and the herdsmen. When all are done, a Mercator's map, in which the several continents and oceans can be seen in their relative position without the interruption occasioned by the hemispheres, will complete the preparation for the use of the maps in future study. Then a few lessons, gathering together the separate ideas in regard to climate, people, vegetation, etc., in different parts of the earth, making a little preparation for future lessons on those subjects, would conclude this introductory course.

These preparatory lessons should be completed at the age of eight or nine. The pupil would then be prepared to use successfully the globe and maps as the objects of study, and to enter at once on the course indicated in the former article.

(To be continued in next number.)

OBJECT TEACHING.

LANGUAGES.

IN most schools much valuable time is devoted to the languages without a commensurate result. Reading, writing, spelling, grammar, and rhetoric, consume about two-thirds of the time in primary schools, and nearly as much in grammar and high schools, without a proportional benefit. The mere acquisition of the faculty to crack the nut-shell thus requires more precious time than the eating, digesting, and assimilating of its contents. For language is the mere shell containing all that in one comprehensive name is called *education*. The thorough study of language is in itself a school of mental and moral gymnastics; but to be this, the study must begin where it now in most schools ends. Reading, writing, spelling, parsing, analyzing, etc., do not constitute the study of language. They are only the beginning of it, and for this beginning the pupil pays too dearly.

Object Teaching, in the most comprehensive meaning of this expression, is the means by which in the study of language, no less than in all other branches of education, time may be economized, and better results obtained. But this question arises: How can language be taught according to the manner of object lessons? This question resolves itself into another: How can language, which we produce almost spontaneously, or unconsciously, be converted into an *object* to be seen, observed, experimented on, analyzed and recomposed, reproduced according to the laws discovered in it, and intelligently understood? It is evident that all other branches of learning present more *objective* features than the science of language has, because it is *within ourselves*, and is a combination of *sound*, *fancy*, and *intellect*, and has little about it which of itself attracts our attention and interest. No wonder that of all laws of Nature, those constituting the life of language are the last to be studied and correctly understood. Comparative Philology, which has so essentially simplified the study of language by showing the variations of general laws in various tongues, is, perhaps, the newest of all sciences. And since the results of this new science have not yet been rendered generally accessible, it is natural that there should be few efficient teachers of language. Nobody, indeed, can teach the science of language who has not mastered at least two different tongues, practically and theoretically.

To teach a child at the same time two, or even three languages, is not more difficult than to teach one of these languages. Any child may be made to acquire his mother tongue more perfectly by acquiring, at the same time, a second living language, or even a second and third, one of which is grammatically acquired. All learning consists in the fixing of impressions which accumulate and connect themselves according to similarities and differences. It requires only a little more time to impress on the mind, together with the image of a *sheep*, its English, its French, and its German name, instead of the English name alone; each of those names is more deeply impressed on account of their difference of sound and identity of meaning; memory is considerably strengthened and recollection facilitated, by fixing each image together with different names. Each name will reproduce its equivalent in the other two languages, whenever needed; the image will recall each of the three names which may be required. Thus from an earlier period the discriminating and the comparing powers of the youthful mind are called into activity, together with memory; and presence of mind, attention, and the faculty of producing the correct pronunciation, are simultaneously exercised.

Thus we see that Object Teaching in languages is best carried on by teaching, beside the mother tongue, at least one foreign language, and the two both grammatically and by conversation. Language becomes more objective, assumes more tangible form, when observed in a foreign tongue and at the same time in the mother tongue. In the form of a foreign sound it is, as it were, a stranger to the mind, and attracts more attention; and the corresponding ex-

pression of the mother tongue, into which it is translated, gains by comparison with the foreign sound and word more of an objective character, is seen more at a distance, used with greater attention, impressed with greater distinctness and correctness.

These few explanations will, perhaps, serve to make many remarkable facts intelligible. It is a fact that spelling may almost entirely be done away with, if the child begins two languages in the lowest class in school, and the teacher understands his business. Accustomed from the first to associate the meaning and the sound of the foreign word with its printed and written image, the mind is trained to execute the same combination with the corresponding word of his mother tongue, fixing in his mind its printed and written representation. Defining may, to a great extent, be dispensed with if two languages are taught at once. Translation exercises step into its place, and fix more fully and correctly the meaning of each individual word. A boy who has learned to translate fluently and correctly into and from one or two foreign tongues, may be depended on to define well the words of his mother tongue. More, he will better discriminate synonyms. It is a bad practice to define *laborious* by "hard," "difficult," or *penalty* by "punishment," the respective expressions being only similar, not identical; such defining weakens in the pupil's mind the discriminating faculty in the use of synonyms. Intonation, Accentuation, and Elocution are among those common English branches in which time may be economized by calling to aid the study of foreign languages. You cannot well acquire their use without intelligently appropriating the laws of accentuation and intonation. If you have once acquired these laws, you know, with slight modifications, the laws of Accent and Intonation in every language, and will make practical applications of the same in every tongue. Even Reading—that great plague of English teachers—is facilitated by learning to read in two languages at the same time.

In schools into which the study of more than one language cannot, under present circumstances, be conveniently introduced, the method of Object Teaching can at least be applied to the mother tongue. Reading, Writing, Spelling, Defining, Parsing, and Analyzing can be taught in such a manner that time will be considerably economized? It can be economized if the teacher himself is intelligent and a student of the laws of language. The *teacher is the school*, and all improvements of the school must begin with him. Of what avail are all improvements in school-books and methods of teaching if *he* is unable to enter into their spirit, to simplify and condense the laws and principles of every branch of learning into the least possible compass, to make pupils constantly analyze and recompose the elements and laws, and make them become their own teachers at the earliest possible stage of development? But to enlarge upon this subject, more space would be required than may be afforded. The subject merits careful consideration.

THE VENTILATING AND WARMING OF SCHOOLROOMS.

VENTILATING.

As if by universal consent, the importance of proper methods of warming and ventilating is disregarded alike by teachers and school officers. Schoolhouses, in the rural districts, frequently possess no means of ventilation except small windows opening from below, or annoying crevices in the walls; while the heating apparatus is a miserable stove, which, after having been worn out by a long term of honorable service in the parlor and afterwards in the spare bedroom, has been donated by some public-spirited individual, who thereby gained great reputation for generosity and attachment to the cause of popular education. This determined neglect, though in a measure pardonable a few years ago, is now utterly inexcusable. There can be no doubt that much of this indifference

arises from ignorance, and that, were the attention of those interested properly directed, a reform might be made. To contribute our mite, we will treat of ventilation in this paper, and of warming hereafter.

A superficial examination will disclose the disastrous effects arising from defective ventilation. Pure air is composed of nitrogen, four parts, and oxygen, one part, by measure. The atmosphere, however, invariably contains such impurities as carbonic acid, ammonia, and organic matter. When overcharged with any of these foreign elements, the air becomes deleterious. Nowhere does it become thus injurious more readily than in a close, crowded room.

THE AIR IN SCHOOLROOMS.

To illustrate this, let us take, as a common case, a schoolroom on a winter day. It is filled with pupils, is well warmed, and the doors and windows are shut. Each person in the room inhales, each minute, five hundred cubic inches of air, and replaces it with a poisonous mixed gas, composed of air, carbonic acid and oxyd, water, effete nitrogen, and the sensibly offensive products of pulmonary perspiration. Besides the action of the lungs, the whole surface of the body is continually giving off vapor of water, as well as more perceptible excrements, through insensible perspiration. The stove is continually abstracting oxygen, the vital gas, from the room, and substituting nothing but irrespirable gases. If the stove is close, it returns no injurious substances, but simply destroys the air by abstracting its vital element. As the room is close, the chimney draws badly and frequent clouds of smoke are driven into the room, so that creosote and other acrid compounds are added to the impurities already present. Here then we have a true picture, to be seen every winter day—a schoolroom with every means for creating impure air, but with no means for its removal. The atmosphere, in an incredibly short time becomes absolutely impure, and as the brain cannot act properly except when in the midst of pure and cool oxygen, clearness of mind is impossible; comatoseness seizes both teacher and pupil, so that frequently the former thus loses a hard-earned reputation. If the air of such a room were removed through a ventilator, it would be disgusting to a person standing in its passage; while, if driven through water, the liquid would soon be colored by animal matter, and acquire a most offensive odor.

THE BEST MODE OF ILLUMINATING.

In schools held at night the lights are an additional source of impurity, inasmuch as they withdraw oxygen from the air and return it in combination with carbon or hydrogen. Not unfrequently, when the materials used for illumination are impure, compounds of sulphur and ammonia are also formed, which are dissolved in the vapor of water in the air, and either condense upon the furniture, corroding it, or are drawn into the lungs, where they are productive of very serious injury. Illuminating gas is unquestionably the best agent for lighting schools, halls, etc., since for the production of a given amount of light, it requires less oxygen than either candles or oil, and moreover produces forcible upward currents in the air, thereby assisting ventilation.

The agents to which we have referred are at work, with more or less activity, in every schoolroom, and unless some means is employed to counteract their effects, lasting injury to the occupants must result. To obviate such a difficulty by the removal of impurities is the object of ventilation, which, if perfect, would continually remove all the contaminated air and supply an equal volume of pure air in its place. This theoretical perfection is yet unattained.

HOW MUCH AIR DO WE NEED?

The amount of fresh air required for thorough ventilation cannot be accurately stated; it is impossible to estimate exactly the quantity destroyed by respiration, cutaneous perspiration, and combustion. The requisite amount is variously stated. According to Hood, only three and one-half cubic feet per minute are necessary for each individual. Brenan regards ten and one-quarter feet as absolutely essential, while Dr. Reid believes thirty cubic feet per minute no more than sufficient.

THE PRINCIPLE OF VENTILATION.

Most systems of ventilation are based upon the principle that currents are caused in the atmosphere by increase or diminution of temperature. Such currents may at any time be observed by looking across a heated surface at an object, which will then appear to possess an undulatory motion. If a small piece of thin paper be attached by a wire to the side of a stove-pipe, it will be lifted and sustained by the upward current of heated air. If a door leading from a warm room into one colder be opened, and two candles be held, one at the top, the other at the bottom, the flames will be deflected in opposite directions, while the flame of a candle held about the centre will be unaffected. When heated, air becomes specifically lighter and rises. In the Ohio School Library, heated by stoves, the temperature at the ceiling was 30° F. warmer than at the floor. In churches this fact is frequently very perceptible. While the temperature below may be agreeable, in the galleries it may be even stifling. The currents, thus caused, continue to operate until the temperature of the room is nearly equal throughout. While they cause the air to become thoroughly contaminated, they also afford a simple and efficient means of ventilation. In the systems based on this principle, the hot air rises to the ceiling and passes out through openings in the wall, carrying with it the impurities. By another method, known as mechanical ventilation, pure air is forced into the room by large fan-wheels, and the impure air is driven before it. This system is now employed in large halls, and proves effective.

CONSTRUCTION OF BUILDINGS, CHIMNEYS, ETC.

In constructing an apartment with respect to ventilation, care should be taken lest any portion be so arranged as to contaminate the atmosphere unnecessarily. In schoolrooms, especially, the ceiling should not be low, for while the room is kept warm the impurities will in a great measure tend to collect in the upper portion; so that if the ceiling is high, even though the provisions for ventilation are inadequate, the deleterious gases will not to any considerable extent descend to the level of the pupils during school-hours. Defects in the chimneys should be carefully guarded against, in order to avoid smoking or bad draught. Smoky chimneys, according to Dr. Silliman, may arise from various causes: two openings from the same flue may enter one apartment or adjoining apartments communicating with each other, while a fire is kindled in but one; a powerful fire, in one portion of the house, being insufficiently supplied with air from without, may draw from other flues, and so cause a reversal of the draught; the flue may be so large as to permit currents of cold air to descend at the angles, that is, the chimney may be "upside down;" or a high neighboring building may direct a cold current down the flue in certain states of the wind. Frequently only the latter two of these contingencies need be considered. The flues must be smaller at the top than at the bottom, because the air, as it rises, becomes cool and contracted in bulk, so that, unless the flue diminish gradually in size, the warm air cannot force its way out against the pressure of the colder air above. It is well also in any case to provide against the force of the wind by placing upon the chimney cowls hung on vanes to turn against the wind. These precautions will prevent any occurrence of smoky chimneys in small buildings. Remedies for the other difficulties mentioned will readily suggest themselves.

HOW TO DISCHARGE THE IMPURE AIR.

Such general points in the construction having been attended to, means for the escape of impure air should be provided. Apertures in the ceiling or walls are all that are essential. If the openings are made in the wall, they should be as near the flue as possible, in order that the warmth of the air may be maintained during its ascent. The apertures should be provided with a self-regulating valve, which would permit only an upper current. Cowls are frequently placed at the openings of the ventilators on the roof: these take advantage of the wind, which by these contrivances draws up, as it were, the column of impure air by suction. The removal of contaminated air is attended with no difficulty; but when we attempt to procure a proper supply of pure air, the

problem of ventilation becomes complex. The introduction of twenty cubic feet of fresh air per minute, for each individual, is liable to induce draughts, or in winter too great depression of temperature. Countless expedients have been devised, all of which are more or less open to objection. In most apartments, where but few persons assemble, a sufficient supply of fresh air is obtained through crevices about the doors and windows, while the greater portion of the impure air is removed by the grate into the chimney. For larger apartments containing many occupants these will not suffice. For such, perforations in the floor have been recommended, but are of doubtful sanitary effect, as they produce serious draughts and fill the air with dust. The most efficient and least injurious method yet presented is that of admitting the air behind furniture through openings protected by wire-gauze. In this way, local or sharp currents are avoided. The wood work round the base of the walls might be perforated in like manner, and the occupants shielded from the currents by a slight wainscoting rising about two feet. This part of the problem is somewhat obscure. Its connection with warming is so intimate, that we must defer its further consideration until we reach the discussion of the various systems of warming.

STRAY CHAPTERS BY AN OLD SCHOOLMASTER.

"BOARDING AROUND."

AMONG the semi-barbarous customs long prevailing in most of the older country school-districts, not the least is that of "boarding around." The teacher received his board as a portion of his wages, but in order to obtain it was obliged to lodge with his patrons in rotation. The custom arose in the earlier and less civilized days of our country, when money was scarce and highly prized. It was then the custom to pay professional men partly in money and partly in "kind." Teachers, however, were generally unmarried, and therefore could have no possible use for produce. Hence they were compelled to take board in commutation. In those days mental labor was held in slight esteem, and, although required to work from 8 A. M. till 5 P. M., teachers were regarded as little more than respectable idlers. It was therefore thought no more than proper that they should be at some inconvenience in obtaining their daily bread.

"Boarding round" still prevails in some portions of the country, but is pretty generally abolished. Farmers have found it better to pay a few extra dollars than to have their privacy intruded upon and their family affairs laid open to the public view. Teachers, more especially those of the female sex, were sadly given to commenting upon the peculiarities of households, and so necessarily became the vehicles of common slander. This was encouraged by the people themselves. Indeed, I know of instances where teachers found it necessary to gossip excessively in order to retain their positions, as, by many, no teacher was regarded as "qualified" unless capable of giving in detail every bit of domestic scandal occurring in the households through which he passed.

As time wore on, however, this gossiping was found to possess serious drawbacks. Moreover, as civilization advanced the instructor became more respected, and more regard was paid to his comfort. The sudden change from feather beds and heavy blankets to wretched straw beds and damp coverings, often induced disease; the incessant clatter of tongues and urgent inquiries concerning the affairs of neighbors, were harassing. Besides, the school districts were frequently of great extent, so that it was sadly inconvenient for the poor instructor to trudge five or six miles through heavy snow to the cold school-room, where he had to kindle his own fire. These selfish and benevolent considerations together have, in great measure, effected the reform.

MR. WILLIAMS BOARDS AROUND.

The winter term in H—— contained one hundred and twelve days. There were

sixty-five pupils, and therefore the teacher must remain about two days at the house of each pupil. Sometimes Mr. Williams was fortunate enough to stay five or six days in one family, but never in such cases found his comfort much enhanced, for generally when a farmer luxuriates in a large family of children he finds very little upon which to support them. Consequently, under such circumstances, Mr. Williams was usually on short allowance. In the town of H—— these prolific families all lived at a great distance from the school, and thus another difficulty was added to the pedagogue's category; for it was well understood that, though the snow were five feet deep, or the road overflowed by a new deluge, there could be no excuse for his absence, lest some pupil, more daring than the rest, might be bold enough to force his way through to the school.

Just before reaching Mr. Flint's turn, Mr. Williams had been boarding at the house of a wealthy farmer. There he had been put in the spare bedroom which had been unoccupied for eight months. Of course no attention had been paid to airing the sheets, and as the weather had been damp, our worthy friend took a severe cold. This, too, although he had been regaled with boiled potatoes and salt pork, fried to the very perfection of crisp. As teaching school with a sore throat was no easy matter, he was anxious to change his quarters. Not indeed that he expected more delicate food, or more comfortable accommodations, but rather because he was well acquainted with Mr. Flint's peculiarities, and surmised that the bedclothes would not be damp, since they would have to be taken from the family beds.

HIS EXPERIENCE AT MR. FLINT'S.

Whatever were his expectations, Mr. Williams evinced great pleasure upon arriving at Mr. Flint's, and was most heartily welcomed by Mrs. Flint, whose unpopularity among her neighbors was such that she had no means of gleaning the town slander. She had therefore for a long time anxiously awaited Mr. Williams' arrival. So likewise had poor Thomas; but from different motives. He, if it were possible, feared the pedagogue more than he did his father, and shuddered lest upon his arrival he might use the rod, or cause his father to do so. But Tommy was forgotten, and did not receive even a nod of recognition, for Mr. Williams belonged to that race of teachers, unfortunately not yet extinct, whose acquaintance with the pupil ceases the moment he crosses the threshold of the school.

Anxious as Mrs. Flint was to learn the news, she controlled herself so far as to remain apparently comfortable until she had graciously served a sumptuous supper, consisting of the usual complement of warm potatoes, dried blackberries, and cold pork. This having been discussed in a hearty manner they adjourned to the fireside, where the affairs of the neighbors might be impartially investigated. Mrs. Flint was uncomfortable—she evidently desired to speak to Mr. Williams about something, but, awed by his remarkably abstracted appearance, refrained. Thomas lay crouching beside the fire awaiting interesting developments. Silence reigned supreme, until Mr. Williams with a genial smile stretched out his arms, opened his mouth, and asked Mrs. Flint whether she had heard of "the astounding denouement of the peculiarly disastrous catastrophe at Mr. Townsend's."

"Goodness! No, what's that?" ejaculated the stricken woman.

"Why you see," continued Mr. Williams, "Mr. Townsend was given to staying out late of nights—"

"I told you so, Flint. I knew no good could come out of Townsend. Just as I expected—been courting some other man's wife. Poor woman! how I pity his wife! I dare say she is most broken-hearted. Oh! it's awful—"

"Pon my word, Mrs. Flint, I assure you, you are entirely wr—"

"Oh, no I an't. I saw him the other day out riding with Mrs. Aiken, way down the road."

"Bless my soul," cried Flint, "I hope that an't so. I don't believe Mrs. Aiken would run away with a married man. I always liked her. When I was younger I used to like to—"

"Flint, you'll kill me, I know you will! I suppose the next thing will be, you'll be

running off with that ugly, dirty woman,—if Mr. Townsend don't get off with her first."

"'Pon my word," said the thoroughly horrified Mr. Williams, "I declare you've entirely mistaken what I meant to say. I wasn't talking about that. Hadn't the slightest idea. I was only going to tell you how Mr. Townsend's hennery took fire, and how, by being out late at night, he happened to find it out in time to save his turkey gobbler. There wasn't any thing wrong there."

Mr. Flint laughed at Mrs. Flint, who looked severely sad and disappointed. At length her anger found vent upon poor Tommy, whom, with direful rage, she struck and drove to bed. While she was thus employed, her husband engaged the pedagoge on political matters. The embargo upon foreign trade by Jefferson, although two or three years out of date, had but thoroughly come to the knowledge of H—— at this time, and was then, of course, the leading topic. While they were thus engaged, Mr. Townsend, to whom reference was before made, walked in. He was an individual of great importance and self-esteem, and upon being informed of the topic under consideration, proceeded to deliver a dissertation, in the course of which he quoted largely from the Bible. Among others occurred the, as he termed it, familiar passage in Proverbs: "Time and tide wait for no man." "'Taint in the Bible," says Flint. "'Taint in Proverbs, anyhow," says Williams. "Don't care," says Townsend, "if it 'aint there it's good enough to be there," and so he continued his discourse unabashed until Mrs. Flint returned.

How unfathomable is the female mind! Mrs. Flint welcomed Mr. Townsend as cordially as though she had never entertained a suspicion against him. Her return was the signal for renewing the gossip. There happened to reside in the lower or western part of the town an antiquated matron with two sons and four daughters, fine marriageable girls. Unfortunately the spinsters could obtain no husbands because of their mother's schemes to entrap young men. This family, therefore, afforded a very reasonable topic for conversation. The men, I regret to say, joined in repeating the scandal, for in those days they were more domestic in their habits and consequently more readily molded after their wives' patterns than now. Poor Mrs. Holliday, how her reputation suffered that night at the hands of her unscrupulous judges! Her motives, her plans, were all distorted, and she was abused and slandered until Mrs. Flint lost her breath and intimated that it was time to go to bed. Mr. Townsend unhitched his horse and rapidly drove home. It was now eight o'clock, the hour at which all good country people of the olden time retired in winter. Mr. Williams was then shown to his room and left for the night.

How sadly was he disappointed! Instead of comfort he found wretchedness. His room had been used as a store-room: there were apples drying on the rafters, bags of feathers nestling in the corners, and musty hams hanging round the walls. The windows had lost their first estate, if indeed they had ever enjoyed any. Dirty rags and rejected garments filled up the holes intended for glass, giving the place an appearance of the utmost desolation. In sorrow the poor schoolmaster retired—to sleep? No; but to listen; for during the whole night starveling rats held high carnival round his head and pillow, and playing atrocious pranks with his hallowed nose; now driven by fierce assault; in a moment returning with redoubled host and vigor, until at last poor Williams, wearied with incessant fighting, yielded the battle, and wrapping himself tightly in the blanket, gave himself over to slumber continually broken by harassing dreams and terrific nightmares. Sleep at length became impossible, and so with becoming resignation the wretched man yielded to his fate. The morning light stole through the rags in the windows, and found him sitting bolt upright in bed with sunken cheeks and glaring eyes. Hastily dressing, he rushed down stairs, helped milk the cows, bolted his breakfast and hurried off to school, where after kindling the fire he soon regained his accustomed equanimity. With difficulty he succeeded in opening the school, and soon after fell into a most comforting nap, from which he was awakened by the snoring of two children sleeping at his feet.

Evening came: Mr. Williams slowly and sorrowfully wended his way to the abode of the Stingy Family. For many a year he had been a teacher; he had slept on boards, in dwelling-houses, and in barns; by unscrupulous boys he had been washed with snow, and dipped in creeks, but never had he suffered as on the preceding night. Calmly though resignedly he ate his supper, and anxiously waited the summons to retire. Supposing him ill, Mrs. Flint insisted upon administering some thoroughwort tea, which she believed to be a "cure-all."

At length he went to his room. The night was bitterly cold, and the wind screamed wildly as it drove past the pitiful heap of logs which protected him. The rats, fearful of the cold, nestled closely together in their holes, and Mr. Williams went to bed gratefully pouring out his thanks to Providence for vouchsafing so wonderful a deliverance. In this frame of mind he quickly fell asleep. While the pedagogue slept the storm howled on, until it cleared its throat by a fall of snow. Coming from the east, it tore up trees and prostrated barns. The Flint homestead it summarily disposed of by removing the roof, and depositing it some rods away. And still it snowed—as much in Mr. Williams' bedroom as in the open field. But the schoolmaster slept on; the toils of the preceding night had unfitted him for wakefulness.

But when, at early morn, Mr. Flint's enterprising chanticleer, peering out above the snow, crowed his cheerful and defiant summons, the poor pedagogue woke to any thing but a proper sense of his condition. He was bewildered—snow upon him, around him, and in him; for as he gaped in astonishment, the wind drove the snow down his throat. But the musty hams still hanging round the walls, and the stuffed windows, enabled him to realize his situation; its horrible nature can scarcely be conceived. His clothes, carefully laid on the deformed chair, which formed the only furniture of the room, were full of snow; while his boots appeared to have been special objects of dislike to the storm, since over them had drifted a sadly picturesque pile. Summoning all his courage, he leaped from bed, dressed himself with the rapidity becoming his contemplated "change of base," and hastened down stairs to acquaint the proprietors with the state of affairs.

You who have been made acquainted with the peculiarities of the family, can readily conjecture the dejection of the Flints as they revolved in their minds the loss they had suffered; and you may also imagine the sorrow of Mr. Williams, who, because of their abstracted minds, was compelled to go to school without his breakfast, there to sweep the snow from the schoolroom floor. But I need not follow this disheartening subject. Mr. Williams' health was not improved by his change of quarters; indeed, I feel safe in saying that it was made worse—so much so, in fact, that he scarcely recovered his voice sufficiently to admit of his officiating at the closing exhibition of his school. This took place about three weeks afterward, and if in the mean time I can lay my hands on the records, this grand Exhibition will be the subject of the next chapter.

THE NEW SCHOOL-LAWS OF MARYLAND.

THE school system of Maryland has been remodeled by legislative enactments; a summary of the principal features is here given. The new law provides,

1st. For a Board of Public Instruction, consisting of the Governor, Lieutenant-Governor, Speaker of the House of Delegates, and the State Superintendent of Public Instruction, and for Boards of School Commissioners for the city of Baltimore and for each county.

2d. For the establishment of Infant, Primary, High, Normal, Model, and Experimental Schools and Colleges, and a Law School.

3d. For a uniform series of Text-books, to be selected by the State Board and contracted for by them; but any county or parent may purchase the required books from any parties they choose other than the State officers.

4th. For Teachers' Associations and Institutes. The Associations to meet quarterly in each county, one for every twenty-five schools. The Institutes to hold one session yearly, of at least six days, and to be composed of at least fifty teachers from one or more adjacent counties. These Institutes to be temporary Normal Schools, and teachers to attend under penalty of from five to twenty-five dollars.

The Board of Public Instruction meet quarterly, supervise all colleges and public schools, issue a code of by-laws, appoint the four professors of the normal school, may remove any county commissioner for neglect of duty, and hold all lands, money, or personal property, in trust for the use of schools. Their incidental expenses are not to exceed $500 per annum. This and superintendent's salary to be paid by the State.

The State superintendent's office must be in Baltimore; he is to visit each county annually, hold teachers' institutes, deliver public addresses, send circulars to commissioners and teachers respecting the best methods of conducting schools, and report to the Governor on the fifteenth of December yearly; he may grant certificates of qualification to teachers, or annul any granted by others, when acquiesced in by the Board of Education; he may decide controversies which arise under this law, but not prevent any case from being tried, if desired, by the law courts; nor has he any jurisdiction in matters relative to money, property, or vested rights; he is to collect in his office school-books, apparatus, maps, and charts, and to expend $100 yearly for rare and valuable works on education, for the benefit and use of teachers; he is to subscribe to such school journals and journals of education as he may consider valuable, and furnish lists of books suited for school-district libraries.

The County School Commissioners are appointed for four years, by the State Board of Education; each commissioner to have charge of not less than fifteen schools. Every county board has a president also, appointed by the State board to examine teachers and have a general superintendence of every thing pertaining to education in his county. The commissioners are to lay off school-districts where counties have not been so divided, or amend such as have, if thought not suitable—the districts not to exceed four miles square; the surveying, registering, &c., to be at the cost of the county. Each commissioner appoints the teachers for his portion of the county, from those who hold certificates of qualification from the president of the board or the State superintendent of the Normal School.

The resident voters of each school district meet the first Monday in May yearly, to discuss matters relative to their school and make suggestions to the Board of Commissioners. Thus the people may counsel and advise, but not directly control the management of the schools. If they contribute $20 yearly to the school library, the State will do the same.

Schoolhouses are to be built on a uniform plan hereafter, having proper regard to light and ventilation, from drawings to be furnished by the State superintendent. Disfiguring the buildings in any way has a fine of $50 or thirty days' imprisonment, or both. Schools to be kept open at least six months in the year, and not longer than ten. July and August to be vacation. School sessions must be six hours a day, Saturdays excepted, and to be free to all *white* youths over six and under nineteen years of age. The branches to be taught are: Orthography, Reading, Writing, English Grammar, Geography, Arithmetic, History of the United States; also, Algebra, Book-keeping, Natural Philosophy, Vocal Music, Drawing, Physiology, Hygiene, and Domestic Economy (Political Economy being singularly overlooked). Schools of over sixty children to have two teachers. Public examinations *quarterly*. Persons disturbing a school, while in session, are liable to a fine of $20, or thirty days' imprisonment. Salaries of teachers to be fixed, from time to time, by each Board of

County Commissioners. No child who has not been vaccinated, can be admitted in any school.

There is to be at least one High School in each county, for instruction in Latin, Greek, and Mathematics, sufficient to enter any one of the State colleges, and also in Military Tactics. The terms of admission to these High Schools to be fixed hereafter by the State Board of Education.

The State colleges, or the University of Maryland, are: St. John's, Annapolis; Washington, Chestertown; Agricultural, Prince George's County; Faculty of Arts and Sciences, Baltimore; and the Law School, Annapolis. All these receive endowments from the State, and are to educate and furnish books free to one hundred and fifty male students; and the Law School to ten graduates of these colleges. (The Medical School was to have taken ten others free, but this was unfortunately rejected in the Legislature.) The Baltimore Female College receives free twenty-two young ladies,—one from each county and the city, having been endowed with $2200 yearly, which places that institution in a highly favorable position. Graduates of the High Schools are to have preference for appointments to *free* tuition in the colleges. The annual commencement of all these colleges is to be on the fourth of July.

The State Normal School is to be located for the present in Baltimore. The number of students of both sexes to be educated free in the science of teaching, is not to exceed two hundred and fifty, with fifty more at $25 a session. In conjunction with the Normal School are to be Model and Experimental Schools, located in any part of the State required, and to be *pay* schools, for the benefit of those who do not desire to send to *free* schools, yet wish to be connected with the organization of public instruction.

The school taxes paid by colored people, and any donations made, are set aside for schools for colored children, to be under the direction of the School Commissioners.

All private schools, academies, and colleges to report to the President of the School Commissioners of the city or county in which they are located, on or before the first of July, annually, according as the blanks to be sent them may require.

Male teachers must not be less than twenty, nor females less than eighteen years of age. Their certificates to be good for three years, and to cost them one or two dollars, according to grade.

The teachers of primary schools to be paid from a State tax of 15 cents on each $100 of taxable property and the present free-school fund, to be distributed to the city and counties in proportion to their respective population between five and twenty years of age. All local or county taxes for educational purposes to cease after the year 1866. It is estimated by the superintendent this will pay the thousand country primary school-teachers required, an average of $345 per annum. Schools now in operation under existing laws to continue until the 30th of June, 1865, and the new system to go into operation throughout the State on the 1st of September ensuing.

OUT-DOOR LESSONS.

RURAL excursions, in developing the youthful mind and heart, are most important. The anticipation of rambles through meadow, grove, and forest, have a wonderful effect in awakening the dormant powers, and reanimating the weary brain. They furnish the means of illustrating many studies more happily than can be done in the school-room; they aid in impressing truth more vividly, and they create habits of observation and reflection.

Seasons of unrestrained enjoyment draw closer the bonds of affection between teacher and pupil. They promote harmony among the children, and afford them frequent occasions for practising self-denial, generosity, and other noble traits of character. They cultivate a love for the pure

and beautiful, and a spirit of communion between our better nature and the Nature around us. They exalt the imagination, and lead even the youngest to experience higher pleasures than those of sense.

My own pupils have become so accustomed to these out-door lessons that they expect them as they do any school exercise. From the first budding, balmy days of Spring, to the last bright afternoon of Autumn, they are eager for a walk to the mountain. When the warm and dry days of Spring come, I often hear at recess a whispering in the hall, and presently two or three of the youngest come in smiling and blushing with the petition—"Miss French, the girls say won't you please take us to the mountain this afternoon?" As their wish is her own, Miss French often consents, and dismissing them a little earlier than usual, with an injunction to be ready by one o'clock, we go home to get a lunch. At the appointed hour all are at the schoolroom again, each with a little basket containing sandwiches, pickles, preserves, fruit, or whatever dainty the mother's kind hands can prepare in an hour.

A walk of half a mile brings us to a gushing spring, where we refresh ourselves with its sparkling water. Then pushing up the mountainside another half mile, and down into a shaded ravine with its merry brook dancing over pebbles and leaping over rocks, we presently come upon another spring at the side of a smooth grassy lawn. Here the baskets are set down, and a general search begins for wild-flowers and leaves, mosses and ferns.

The teacher is kept busy looking at the treasures collected, and answering the questions as one and another comes eagerly with, "Oh, Miss French see this beautiful moss!" "See what a singular insect!" "Oh, what plant is this? Will it grow if I take it home?" and sometimes the teacher cannot answer all these eager questions.

Now the baskets are opened, snowy linen is laid under the trees, the luncheon spread, and hungry little girls help each other before helping themselves, while many a pleasant word and merry laugh enliven the mountain meal. Playing and singing for an hour brings the time for us to turn homeward. At the schoolroom door we part until the morrow, when brighter faces and more perfect lessons are the teacher's reward.

As the days grow longer and warmer, the young faces begin to look tired and the young minds seem less active; and we go again. This time, perhaps, we visit the "River of Rocks," a long and wide bed of huge mass-covered rocks, lying in a gorge between spurs of the mountain, seeming to have been swept there by some mighty flood, ages ago. After skipping, climbing, and tumbling over the rocks, little groups seat themselves here and there, chatting in girlish fashion, wondering how and when the rocks got there, plying their teacher with all manner of questions, and wishing for a geologist to tell them every thing about them. Then flowers are sought again, and we go home laden with rare gifts from our grand old mountain—bouquets of gay scarlet columbine, wild honeysuckle, and clusters of pink and white laurel with its dark, glossy foliage. But better than all, the pure, bracing air, the balmy mountain odors, and the sweet music of birds have cheered our drooping spirits, and imparted a keener relish for mental labor.

At the close of the term comes our grand "gala day," when we invite the families of all the children, and all our former pupils to accompany us. But perhaps the gayest of all are our "Indian Summer" holidays. Then the brilliant scarlet, crimson, golden, and brown leaves are woven by skillful little fingers into wreaths, garlands, crowns, and banners, and my laughing girls are transformed into sylvan princesses in their royal apparel and rich embroidery, happier than Stewart's most costly fabrics could make them.

The next morning when the teacher enters the school-room she finds them all gathered around the "color chart," comparing the tints, shades, and hues of the leaves they have brought, and referring to her the decision of some uncertain shade. And so it is always when we go out—something is better learned than if we had not gone; our hearts are refreshed, and our bodies invigorated more thoroughly than by a lonely, solitary walk.

Thus, by my own experience, I have be-

come convinced that the teacher has no more effective auxiliary in the work of training children aright, than the very simple one of bringing them freely and frequently into contact with the holy truths and mysteries of Nature, and winning them to "listen to her teachings." Clouds and sunshine, earth and air, all have their lessons of wisdom for the willing pupil, to ennoble, purify, and bless.

OUR MILITARY SCHOOLS.

II.

IN a former paper we endeavored to show the importance of educating the people of this country in the use of arms, and recommended military discipline and drill in school as best calculated to secure this end, without interfering with the pursuits of peace. Beside the preparation thus afforded for national defence, there are many benefits to be derived from such military training by the pupils themselves.

I. Physical Development.—In the first place, we recommend military exercises for the physical development which they give.

Our best students often turn out to be our least useful men, for want of that strength and elasticity which well-regulated exercise at school would impart. Such students, if left to themselves, either take no exercise at all, or else they take it in a violent, irregular, and imprudent manner.

Military drill, if properly varied and adapted to their strength and temper, will be found to meet exactly their wants. It makes a certain amount of out-door work imperative, corrects the stooping position of the head and shoulders, expands the chest, and quickens the circulation by bringing into moderate exercise nearly all the muscles of the body. More than this, and what is of equal importance to all classes of boys, military drill imparts a firm, graceful, and manly carriage, giving ease to every motion, and tending to overcome awkwardness and constraint. This exercise, more than any other, serves to bring the body into prompt obedience to the mind. It trains the muscles to respond instantly to the dictates of the will, and thus secures to the individual through life readiness and accuracy of action, which might otherwise have been blundering and dilatory.

We cannot leave this part of the subject without an earnest word of protest against the neglect of physical training that has generally prevailed in our schools. It would seem to be unnecessary to make an appeal upon a point already so largely discussed, and so generally conceded by the intelligent public. Yet very few seem, by their actions, to regard the matter as of any consequence. Teachers are hindered from carrying out their honest convictions in this matter by the demand of parents for high-pressure mental training, for a certain course of books to be gone through in the fewest possible years, regardless alike of the welfare of body and soul. The brain is thus abnormally and prematurely developed, and the body becomes an intellectual prodigy. Education, however, is not a mere cramming of the mind, but a harmonious development of the whole being, physical, mental, social, and moral; and to neglect any one of these is to do a great injury to the future career of the pupil.

II. Mental Training.—We come now to consider the effect of military training upon the mind.

The first, though not the principal benefit to be noticed, is, that much useful information upon military matters is gained, which is at this day an essential part of a good education.

The instructor should not aim merely to impart proficiency in drill, but should make his pupils, of a proper age, familiar with military terms and forms of ceremony, with the construction and use of light

arms, artillery, and projectiles, with the details of camp life, and the maneuvering of skirmishers in the field, with the construction of fortifications, bridges, and with all the elements of military science.

The knowledge thus gradually and almost imperceptibly acquired at school, would be valuable to every intelligent man. Aside from this, there is a certain discipline of mind resulting from military training, which can be acquired in no other way so well. As the body is habituated to prompt obedience to the will, so the mind is trained to quick comprehension and rapid decision. And as the stiff and awkward motions of the body are softened into grace, so also are the wavering and hesitating habits of the mind overcome.

Again, military discipline, if discreetly applied, exerts a powerful and beneficial influence upon the character of boys. They have a share and interest in the government of the school, if administered upon this plan. Their feeling of honor, their self-respect, and their sense of individual responsibility is thus increased, which could not be the case under the old system of appointing "monitors." The officers learn to bear position and power with becoming modesty and forbearance, if they would retain the confidence of the teacher and the respect of their comrades; and all pupils learn subordination and deference to delegated authority. Such training will be of great benefit to the State as well as to the individual.

Further, we think that observation will show, that military exercises stimulate the ambition of many otherwise listless boys, giving an impetus to their progress in every department; and that it begets in all the pupils an *esprit du corps*, which very much increases their happiness and contentment.

We have known many indifferent and idle boys changed to enthusiastic students under the healthful stimulus of military emulation, a new life being given to their whole physical and intellectual being.

We have now imperfectly noticed the principal benefits arising from such a military education as might be obtained at school, though we are far from asserting that such benefits do always result, in the present imperfect condition of this department. Still, while we admit that there are yet many imperfections in our military system as applied to schools, we must deny the force of some objections which are often raised. One objection is, that it creates a military spirit in the boys. No patriotic man or woman (except, perhaps, a Quaker) should deprecate such a spirit. In time of peace it could do no harm, and in time of war might be of incalculable benefit to the country. The whole tendency of our institutions is unfavorable to the cultivation of a military spirit; hence it becomes us to encourage rather than to hinder it. Again, it is urged that the time devoted to drill is so much lost from study. This objection can have no weight until it be shown that the pupils of military schools generally maintain a lower grade of scholarship than those of other schools. The discipline of body and mind afforded by military exercises, gives greater vigor to study, and greater relish to sport.

Another source of anxiety to parents, is the danger of handling firearms. Such parents forget that it is far better that their boys should be taught to handle them skillfully, than that they be left to experiment for themselves, as invariably they will do sooner or later.

In view of the insufficiency of all such objections, and of the many advantages to be derived from military exercises, it will appear that they are calculated to supply a great deficiency in our educational system, and to contribute to the healthful development and intellectual progress of the pupils.

It is not strange that many imperfections at present exist in our system of military education, for heretofore the subject has received but little public attention. Each teacher has acted independently in the matter, and often without a clear conception of the ends to be secured.

It is only by discussion, by a comparison of many systems and results, and by uniting the experience of able instructors, that a substantial and adequate system of military training at school can be devised.

That such discussion may result, and that such a conference may be secured by men devoted to the cause of our country's defence and education, is the earnest wish of the writer.

HEALTH OF CHILDREN AT SCHOOL.

[Although calisthenic exercises are doing much for the welfare of the pupils in many schools, yet much which would conduce to their physical development is left undone. The subject is not likely to be regarded with too much attention. The views here presented are a synopsis of recent articles in the Herald of Health and the Massachusetts Teacher. They are worthy the consideration of every teacher and parent.—J. W. H. C.]

WHEN Spurzheim was lecturing upon Phrenology, in Boston, the educators in that city took special pains to show him the paraphernalia used in the Public Schools. After viewing them, he remarked that "the best schoolhouse they had was the Common, where the young could get fresh air, vigorous exercise, and an acquaintance with nature." Much as Bostonians respected the claims of this noble man, his remark was not turned to any practical account by making more Commons, nor by turning the youth of the schools into their already ample one, every day, to become educated in body. The old course was held, and intellectual cramming is now practiced. It is a question whether the public schools of Boston are not doing more harm than good, by killing the bodies of the youth, or so warping them that they make only common-place persons when grown to maturity.

The paleness and ghostliness of the faces of the children, especially in the Girls' Schools, is notable. Such ought not to be the appearance of children; especially of girls between the ages of ten and sixteen. At that age the body, the mind, and the character are forming; and they cannot be brought to a vigorous, earnest, and happy maturity without perfect health. Children at that age ought to have rosy cheeks, rounded forms, and playful vivacity.

That in some of our schools they do not have such features is owing, doubtless, to many causes over which the teacher has little control;—too much confinement, unwholesome food and bad hours at home, too little exercise in the open air, too little enjoyment of sunshine, which is the great health-giver, to an unwise and unchristian excitement from the desire to surpass, and to gain medals and diplomas, and lastly, omitting others which will occur to the thoughtful teacher, to too long lessons. This last cause deserves attention, for over this the teacher usually has considerable power.

Long lessons are unfavorable, short lessons are favorable, to health of the body; to health of the mind; to health of the moral nature; to the happiness of childhood.

1. Long lessons are dangerous to the bodily health. When the growth is rapid, it often absorbs the whole strength of the system. A rapidly growing child is incapable of much or long-continued mental exertion. The energies of the whole nature are taken up with growing. While that is the case, plenty of time should be allowed for rest. Sleep should be long and sound; should begin early in the night and be continued until it ceases of itself,—till the system is refreshed. An abundance of healthful food should be taken; and time should be allowed for eating it, and time for digesting. A child with a long lesson to learn out of school, is in danger of waking prematurely, and thus cheating himself out of the sleep which is essential to health. He is in danger of hurrying through his meals and of hastening to his studies immediately after them. He is afraid of lounging in a chair or upon the sofa, or of a lazy stroll in the air or sunshine. The brightest, noblest, most gentle and most gifted person I have ever known, died prematurely and blasted a thousand hopes, merely from being kept hard at study at the age when all the resources of his physical nature should have been allowed to sustain a rapid growth. Few are aware how much should be allowed to the exigencies of nature during this period.

We act as if we were saying, "The body —this perishing piece of clay—is of no great value, in comparison with the mind, the moral nature, the soul." But nature teaches us another lesson. The laws of the bodily health are Nature's laws as really as the laws of mind and soul, and are to be reverenced as such.

2. *Long lessons are dangerous to the*

health of the mind. At no age is the mind capable of long-continued exertion. J. Q. Adams could not read long without his thoughts beginning to wander. Whenever this occurred, whether at five in the morning, or at nine at night, he immediately went out and took a walk in the open air, and came back refreshed, and resumed his book or pen.

In childhood, long-continued thought is impossible; little can be learned at a time. If very little is attempted, that little may be perfectly learned. If too much is attempted at once, all will be imperfectly learned. Now, none but exact, clear, perfectly distinct thoughts are of any value; of such thoughts the mind of a child is capable of receiving only one at once, only a few in a day. A fact, a principle, a truth, imperfectly grasped, makes no deep impression, and that impression speedily passes away. The few thoughts that are received by the mind while perfectly fresh and vigorous, may remain, and, if often renewed, become a part of the mind's treasures. If the lessons are very short, the child may be able to retain all the thoughts; if too long, he will be likely to retain none of them thoroughly.

Beside, one great object of study is to form habits of vigorous mental action. If the mind is allowed to act only as long as it can act vigorously, such habits will be formed. While, if the mind is forced to act when it has become weak, and has lost its elasticity, it will form habits of feeble and sluggish action.

3. *Long lessons are dangerous to the moral nature of the child.* Every child in perfect health, physical, moral, and mental, is full of inquisitiveness and curiosity, and receives new ideas suited to his condition and state of progress, with satisfaction and delight. And, with proper management, this mode of feeling may be made habitual. But if more facts, principles, or truths, of any kind, be forced upon the child than he has power and time to receive fully and comprehend perfectly, he becomes wearied with the unavailing effort and pained by the indistinctness of the images presented to his mind; and truths which, presented properly, would have been gratifying and delightful, become distasteful and repulsive. This feeling, daily repeated, is transferred to the subject of the lessons. He comes to dislike a study which might have been a source of enjoyment to him for his life. This feeling of dislike may extend itself to the teacher and the school.

4. *Long lessons are dangerous to the happiness of childhood.* A child growing up in health and under judicious management, listens with delight to every story he can understand. He examines curiously every object he sees. Every plant, every animal, every stone, is beautiful to him. He asks a thousand questions; and if satisfactory answers are given, he will continue to ask others, almost without end. Day after day he likes to hear the same story, and to handle and examine the same things; and he continues to do so until he understands them. Then every new object is a new source of delight, provided that too many new objects are not presented on the same day. To be happy and healthy, he must be much in the open air, at liberty to go hither and thither, and to play with—really to study—what he pleases.

Long lessons are not, however, the only causes of the paleness and ghostliness of the children at school, which come within the teacher's control. Bad air in schoolhouses is a most notorious cause of this condition. We live in proportion as we breathe, other things being equal. If any class of persons ought *always* to have pure air in abundance, it is the pupil at school. He can get a better lesson in a room full of pure air than in one filled with foul air. A teacher should be more careful that his pupils have this great desideratum, than that they say twice four are eight, in performing an example in mathematics.

Next to pure air is gymnastic drill or natural sport. The topmost story of every schoolhouse having no playground, should be devoted to the education of the muscles. The inefficiency and lack of energy in thousands of youth are caused in part by confinement. For youth under ten years of age, three hours' school each day is enough, unless sport and physical culture be put upon the same basis as intellectual skill, when the school may be kept six, eight, or ten hours daily, without injury.

AN OLD LETTER FROM A YOUNG QUAKER SCHOOLMASTER.

[The following is a literal copy of an old letter in the possession of a well-known clergyman of New Jersey. It is unique in its facetiousness, if not interesting as a historical picture.]

WEST TALLOWFIELD, May 26, 1810.

RESPECTED FRIEND—The long-looked-for period has arrived when to my satisfaction I was to receive thy letter. Thee mentions that thee has been informed that we had some very high blades at school during the last term, which I can insure thee is the truth; for I do suppose there never was a time since the school was opened that there was as much mischief carried on as at the present time. . . . . I left the school on the twelfth of May, and went to my father's house. I tarried there but a short time until I undertook a school in the neighborhood of Doe Run, and I am now teaching there. But,

of all professions that this world has known
from clowns and coblers upwards to the throne,
from the grave architect of Greece and Rome,
down to the framer of a farthing broom,
the worst for care and undeserved abuse,
the first in real dignity and use
(if skilled to teach and diligent to rule),
is the learn'd master of a little school.

And to my sorrow I have found that the fifth line is true, for I have a great deal of care on my mind, and it is so confining that I think the saying of a great man in former times would be applicable. Thus: "O liberty! O sound once delightful to every Roman ear—once sacred, now trampled upon!" But, my dear friend and fellow-student, I long to see thee and converse face to face. I seem to be shut up without the privilege of society to mix with, and this day I seem more than commonly dull. Still the spirit of cheerfulness, which I always had, is with me, and helps to bear me up.

I am teaching school, as I said before; and a *tarnal* school it is when I am teacher. I do suppose I tire thy patience, but I intend, for all that, to give thee some account of *my* school. In the first place, I will give thee a general description, and then an individual description. There are about (although I have not counted) three scholars. The largest is about the size of Tom Thumb, and the others are a size smaller. All of them are a very great ways advanced in the spelling-book. However, there are none of them but have got to the letter A, and I believe the foremost is as far as B. This much I thought proper to inform thee of, with respect to the school in general; now for the individuals. The first I shall say anything about is one with no seat in his trowsers, and two holes in each knee. The second is a rusty-looking little soul, but he is the only one in the school that has any coat on, and when they were making it they had not cloth enough to put but one sleeve to it. The other sleeve was torn off fighting bumble-bees. The third I shall say nothing about, as he is beyond description, and therefore will end.

From thy friend,

THOMAS HARRIS.

THE SUN IN A NEW LIGHT.

THE boundless extent of physical science is forcibly illustrated in the study of the sunbeam. What seems more simple than a ray of light? And yet it would require long study to learn all that has been ascertained in relation to it.*

First was Newton's discovery, that the white ray might be split into seven brilliant and beautiful colors. Then it was found that the ray was a compound of three elements, light, heat, and the actinic rays—those which produce the changes in the photograph, and effect all other chemical actions of the sunbeam. Finally, within

* See, in Scientific American, "New Facts in Relation to the Sunbeam."

a few years has come the great discovery that the light produced by burning different substances is not only different in appearance, but when spectra are formed by passing these different kinds of light through a triangular prism, the spectrum of each element is crossed by lines peculiar to itself. Consequently, however far light may travel, it bears in its constitution the evidence of its origin, and thus brings to us from the sun and from the stars a knowledge of the substances glowing there.

Each of the three elements of the sunbeam, light, heat, and the actinic rays, has been subjected to a great number of minute and delicate observations, and many curious facts have been learned in relation to each. Among other things, it has been found that some substances which allow light to pass freely through them are almost wholly impervious to heat.

Professor W. A. Miller, the author of the great work on chemistry, has recently been engaged in ascertaining a similar series of facts in relation to the actinic rays. He finds that the same law applies to these; bodies which possess an equal power of transmitting the luminous rays vary very much in their power of transmitting the chemical rays. This is an important fact in photography, as the lenses should transmit a large proportion of the actinic rays. Of all the substances examined by Professor Miller, none was found to surpass rock crystal in diactinic power. Water, ice, and white fluorspar rival it, and pure rock-salt approaches it very closely. None of the different varieties of glass transmit rays extending beyond one-fifth or one-sixth the range afforded by quartz. A plate of glass less than 1-100th of an inch in thickness cuts off these rays almost as completely as a plate of twenty times the thickness. The vapor of water transmits the actinic rays freely, although it is extremely impervious to those of heat. Of the liquids examined, water is most diactinic, and next in order alcohol.

THE UNFINISHED PROBLEMS OF THE UNIVERSE.

PROFESSOR MITCHELL'S manner and style cannot be forgotten by any one of the immense audiences which attended the delivery of his famous "Five Popular Lectures on Astronomy." He has fallen a sacrifice upon the altar of his country, and mighty events have convulsed the land. Yet a lively interest is and always will be manifested in the works of the great astronomer. We shall reproduce the final lecture of his series, "The Great Unfinished Problems of the Universe," as taken, with slight modifications, from the Pulpit and Rostrum.*

It was delivered in the Academy of Music, New York city, January 29th, 1859. Previous to the Lecture, a series of resolutions, with reference to the erection of an Astronomical Observatory in Central Park was offered by Prof. Loomis, and seconded in an eloquent speech by Prof. Davies, in the course of which a high tribute of praise was paid to Professor Mitchell. We here give a part of his Lecture upon that occasion; the remainder shall appear in our next number.

When I stood, some fourteen years ago, said the lecturer, in my own little city before a multitude like the one which I now have the honor of addressing, and there for the first time lifted my voice in behalf of the erection of a noble structure, whose chief ornament should be one of the grandest instruments that science and skill has ever produced, I ventured to make an appeal of this kind: The Old World looks with comparative contempt upon the profound ignorance and inertness of the New. They point to us and say, Yonder is activity, and strength, and power, and vigor, but it is all put forth to grasp the almighty dollar. And when I stood before that great assemblage and said, Let us rescue our country from the stain that is thus resting upon it—let us show to the crowned heads of Europe that free, independent,

*Pulpit and Rostrum, No. 3. Schermerhorn Bancroft & Co., New York and Philadelphia.

republican America can take the lead even in Science itself, the response to my appeal afforded the most gratifying evidence that in the end this grand object would be accomplished. What is the result? A short time after the commencement of the undertaking—and at that day there was scarcely an Observatory in our country—I visited Europe. I went to Munich, the great centre for the construction of these mighty instruments, and there I stood in the presence of the successors of old Fraunhofer and Utzschneider. I said to them, "Your predecessors sold to the Emperor of Russia the great Equatorial Refractor." And why? Simply because they desired that their skill and handiwork, displayed in this masterpiece, should fall into the hands of some profound astronomer, and thus give them a world-wide reputation. "Sell to me," said I, "poor simple republican that I am—and yet one of the nobles of our land—this mighty refractor, equal to almost any other in the world, at cost, in like manner, and I will guarantee that in the next ten years you will get more orders from the United States than from all the other countries of the world together." They would not make the sale on these terms, and yet during that time they have received more orders from this country than from all others, and we have built more Observatories and erected more magnificent instruments than all the world beside. Now, our scientific men stand on the same high platform with those of Europe. Europeans hail us as brothers in this grand and noble crusade against the stars. We are moving on together—a solid phalanx; the watch-towers are rising all over the earth, and the grand cry is, Onward! It is echoed from Observatory to Observatory. The sentinel is everywhere posted, and do you not mean to post one on your rocky heights? I know you do.

I come now to the discussion of the Unfinished Problems of the Universe. This would seem to imply that there are some which are finished; but I know of none such absolutely. I believe that we are now permitted to announce that the great law of universal gravitation reigns throughout our solar system with absolute command and power. I believe that we can, almost with certainty, announce that its dominion reaches to the fixed stars; and when this is uttered, I think that I have told you all the problems that are finished in the astronomical world.

When we come to the examination of our own system, when we come to inquire whether we have determined the actual and positive movements of the sun, whether we have reached to the precise and critical knowledge of the movements of any planet, whether we are able to predict with absolute precision the place of any one of these revolving worlds, I answer, it has not been done. All we have accomplished is an approximation to perfection. We are moving on from year to year, and every year increases our ability to trace out the movements of these wandering worlds.

Let me exemplify this matter by reference to one single phenomenon. About two hundred years ago, one of those who devoted themselves to the examination of the revolving worlds—one of the followers of old Copernicus—thought he had sufficiently examined the movements of Mercury to predict the fact that it would cross the disc of the sun, and be seen upon the solar surface as a dark, round spot. His computations, however, were such that he felt he must give himself a limit of about five days. Think of it—a limit of five days!

Now, as the planet occupies but a few hours in crossing the disc of the sun, if within this time it should happen that the transit should occur in the night, the astronomer would of course lose the opportunity of verifying his prediction. He watched, therefore, during these days with an intensity which you can scarcely comprehend; and at last his eye was greeted, and his heart gladdened, by finding the planet, true to his prediction, upon the disc of the sun.

But another period of eighty or ninety years in the history of Science rolls away. The astronomers of Paris are all deeply interested and excited with the approach of another of these transits of Mercury. Their computations were such that they believed they could rely upon them within—not five days—but five hours of the time. The sun was to rise with Mercury upon his disc.

The morning arrived, and, armed with their telescopes, they were waiting to verify their computations; but the clouds intervened between them and the sun, and when he rose he was utterly and absolutely invisible. They waited and watched, hoping the clouds would break away and give them the long-coveted opportunity of verifying their computations; but the limit of time passed, and the clouds did not disappear. At length, one after another becoming weary with the watch, yielded up in despair, left his post, and abandoned the observation. But one more doubtful of the computation than the others watched on. At last there came a little rift in the clouds. Through that chasm he hurriedly sent out his telescopic ray, and there, on the rim of the sun, clung the round, black disc of Mercury, telling him precisely within what limit of time their computations were in error.

Five hours was the limit required at that time. We come down to a later period. The Observatory of which I have had the honor of the direction, so far as the building, and the mounting of a single instrument were concerned, was completed in 1845.

In May of that year it was announced that Mercury would again cross the disc of the sun. It was the first observation I ever attempted to make. I had computed with all the delicacy in my power the exact moment when the dark planet would touch the brilliant rim of the sun. I had gone yet further, and computed the exact point on the tremendous circumference of the sun where the contact would take place—for remember, the power of this telescope is so great, that the sun swells out with such tremendous magnitude, as to literally and absolutely cover the whole heavens from horizon to horizon, could it all be taken into the field of vision at one view. The point of contract was brought within the field of vision of the telescope. The eventful day arrived, and the sun rose bright and glorious. Not a cloud stained the deep blue of the heavens. As the hours rolled by, and the time approached, there I was, with feelings such as you can not conceive, understand, or comprehend. My assistants were around me, ready with their chronometers to mark the moment of contact. I hoped and believed that our tables and computations were so accurate that five minutes of time would be a sufficient limit, and five minutes before the appointed time I took my place at the great telescope. There I waited and waited, until it seemed as if an age had gone. I called out, "Surely the time has passed—what of the time?" "Only a single minute!" Second by second, only a minute had rolled away. It seemed as though hours had been sweeping slowly by. Again I took my watch and waited, until again it seemed as though an age had passed. "Surely," said I, "the time is gone." "No—another minute yet." At last I caught the black disc of the planet just impinging upon the bright rim of the sun—in the limits of a minute? No; but *within sixteen seconds of the computed time!*

You see, then, the possibility of advancement. This was not my work, but it was the work of another—Le Verrier. Le Verrier had taken up the movements of the planet Mercury, and with a power and precision of investigation never surpassed had corrected the previous tables, and reduced the theory within such limits that it had now become possible to make these delicate predictions. Do not imagine, however, that after your great Observatory shall have been erected, there is nothing to do. There is every thing yet to do. Reduce these sixteen seconds down to the tenth part of a second of time. Cut it down, and when you have cut down all other errors in like manner and proportion, you will be able to fix the longitude and latitude of your ships at sea, bearing your merchandise and precious freight to all the markets of the habitable globe, and they will wing their way over the trackless deep in perfect and absolute safety.

If faith itself has different dresses worn,
What wonder modes in wit should take their turn?
Oft, leaving what is natural and fit,
The current folly proves the ready wit.

TRUANCY IN NEW YORK.

THE following account of truant children, and the manner of treating them, is derived from the late Report of Mr. N. A. Calkins, the indefatigable Assistant Superintendent of the Public Schools of New York City. Mr. Calkins' suggestions are adapted to any latitude, and his entire report may be read with interest and profit by educators generally.

There are five police officers who are specially detailed to visit the public schools throughout the city, to take the names and residences of such children as the principals have good reason to believe are truants, and then to visit their homes, confer with the parents or guardians of these children, showing them the importance of regular school attendance and the evils of truancy. In many cases this course is found to be all that is required to effect a reformation of the truant pupil. Sometimes it is necessary to arrest a few of these truants and conduct them to school. Others, who have become more confirmed in their evil ways, are committed to the Juvenile Asylum.

During the year 1863 the names and residences of 5,613 children were reported to these officers. On visiting their homes it was ascertained that 1,968 were absent from school for the following reasons: transferred to other schools by their parents; withdrawn from school; kept at home by sickness, poverty, or other reasons; therefore not to be classed as truants. Through the exertions of the officers, 3,092 children were induced to attend school regularly; 159 were arrested and taken to school; 156 confirmed truants were committed to the New York Juvenile Asylum.

During 1864 the names of 4,633 children were reported to these officers as truants. On visiting their homes it was found that 2,080 were able to assign good reasons for their absence, such as attendance at other schools, sickness, &c. The homes of 300 could not be found. The number reported as reformed and now attending school regularly is 1,750; 83 were arrested and taken to school; 145 of the worst cases were committed to the Juvenile Asylum, and 275 still remain truants.

It is found that these truant-officers are diminishing the number of truant pupils from year to year; and if measures could be taken to enable them to carry out that portion of the act of 1853, which relates to the idleness and truancy of those children who wander in the streets without any lawful occupation, or attendance upon any school whatever, it would save thousands from "growing up in ignorance and traveling the road of vice and crime." But to render this law more effective, there should be established a truant-school, where confirmed truants, and those children between the ages of five and fourteen, who lead idle and truant lives, without attending any school, might be submitted to wholesome discipline and proper instruction, until the desired reformation should be accomplished.

As now the knowledge that proper officers are continually searching for absentees from school, already exerts a most salutary influence in deterring from truancy, so the existence of a truant-school, and a proper execution of the law against idleness and vagrancy, would induce multitudes who now totally neglect all means of education, to avail themselves of the facilities afforded in our free-schools.

A PERSEVERING INVENTOR.—The Brussels carpets of England are woven on looms invented by an American, and bought of him. Bigelow, an American, went to England to study carpet weaving in the English looms, but English jealousy would not allow him the opportunity. He took a piece of carpeting and unravelled it thread by thread, and then combined, calculated, and invented the machinery on which the best carpets of Europe and America are woven.

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School Discipline.

DISCIPLINE, school discipline, government, — the words are heard at every gathering of teachers and school commissioners, from Maine to Mexico, but practical illustrations are as rare in their schools as truants at a school excursion.

There is no scheme of education in which the maintenance of discipline is not an essential feature; and there is no teacher who does not profess to have some kind of discipline in his school. And yet, how various and conflicting are the theories on this subject! Some would maintain a military strictness among their pupils, even in a literal sense, as proposed by a contributor in this number of the Monthly; others would allow the greatest possible freedom consistent with proper attention to lessons. From some schools the rod is banished, while in others it is considered that the sparing of the rod is the spoiling of the child, and a contempt of Holy Writ insuring a condign disciplining of the remiss pedagogue in unexplored torrid regions.

There would be less diversity of opinion as to the means necessary for securing discipline, if what the term implies were clearly understood. With many, discipline is considered of no value in itself, and as necessary only in order to keep boys at work. Hence a little noise is not objected to if the pupils are only busy with their appointed tasks, and sometimes an impertinent scholar is tolerated because he is "amazing quick at figures." Perhaps, the teacher is very strict while his pupils are in school: the school hours over, the boys may run wild. It is thought that children will more readily submit to order and obedience when in school, from having had their own way when out. But it requires a firm hand to rule high-spirited youths, alternately checked and indulged, turbulent as fiery steeds; and as this notion of discipline is a very common one, it is no wonder that many teachers fail.

To us, however, it seems that to consider discipline as only a means to an end, and as altogether subordinate to instruction, is to take too narrow a view of it. We regard it as "moral training" and think it should consist essentially in the formation of good habits. Such a view of it would render our efforts toward its attainment more intelligent and effective, while to train children to habits of punctuality, neatness, obedience, and quiet industry, is to them, at least, as valuable as any amount of mere instruction we can impart. Much of the knowledge gained at school is lost more rapidly than acquired, but habits formed there cling to a man through life.

It may be urged that the importance of moral training is no new idea; that in all good schools attention is already given to it. This we readily admit; but too often this training is confined to mere instruction in moral duties, without due regard being paid to the practice of them; and again— and this is more to our present purpose— this moral training is considered as entirely distinct from discipline properly so called. When a boy is punished for any breach of discipline, the reason generally is, that if such delinquencies were allowed, the work of the school could not go on properly. But it would be acting upon a higher principle if the master considered, not so much the effect of the fault upon the working of the school as upon the boy's own character. This is the principle which, we contend, should regulate all rewards and punishments: the improvement of each boy's individual character. Occasionally, a boy will prove incorrigible; expulsion is then the best thing; but these are exceptional cases. As a rule, children will yield to the force of habit, and will in time grow to love the ways which were once irksome to them. The stream, guided at first in its course, will gradually wear for itself a channel in which to flow.

We shall perhaps best illustrate that view of discipline which we have endeavored to explain, by noticing some of its results. In the first place, it will check impatience on the part of the teacher. A young teacher often enters upon his duties with the greatest enthusiasm. He perhaps knows that his pupils are ignorant, rude, and disobedient; but he thinks there is the greater room for improvement—the greater honor to be won in reclaiming them. For a while he labors earnestly; he points out the attractiveness of virtue, the odious nature of vice, and often is pleased with the answers received, and some good impression seems to have been made. But, there is little improvement in conduct; some flagrant act of disobedience or wrong is committed, and all his labor appears to have been in vain. He grows disheartened; he thinks there is something peculiarly vicious in the class of children amongst whom he has been thrown; or, if he is of a timid character, he may begin to doubt his fitness for his profession. But let such teachers clearly understand the nature of the work in which they are engaged, and half their doubts vanish. They should recollect that, in many cases, their pupils have long been accustomed to bad habits, and although they may very willingly assent to all their teacher tells them, still it requires time to overcome those habits. They may speak according to their "infused opinions," but they will act as they have been accustomed to do. But if bad habits exist, good ones may be formed. It is perhaps a work of time, yet the longer the process, the better it is done. A few characters may easily be traced on sand; the next wave obliterates them. A word engraven in a rock remains for ages.

As the discipline for which we contend depends on the formation of habits, it matters comparatively little whether a teacher's manner is kind or severe, provided he is firm and consistent. Much will depend on his own character, and to expect every one to adopt the same means in maintaining discipline, is to endeavor to fit them all to the bed of Procrustes.

But not only will the methods for maintaining discipline depend very much upon the character of the teacher, they will, or at least they ought to vary with the characters of the children. A kind manner may sometimes be imposed upon, and the authority of an indulgent master set at defiance. On the other hand, if the reins are too tight, fear, on the part of the pupils, may produce hypocrisy; or perhaps a high-spirited lad whom a kind word would have gained, is driven by harshness into open rebellion.

One rule, however, must be observed by all who wish to bring about a good moral tone in the school—whatever command is given must be obeyed; whatever is forbidden must never be allowed. The only really bad disciplinarians, therefore, are those teachers whose characters and dispositions are so changeable that they are never in the same mood two days together. For habits are formed by repeated acts; and if by firmness an impression is made one day, and then effaced through indulgence the next, no progress can be made, and the children become irritated and vexed. This fickleness of character among teachers is far from being uncommon, and may arise either from weakness of character or infirmity of temper. All recollect Goldsmith's Village Schoolmaster—

> "Well had the boding trembler learned to trace
> The day's disasters in his morning face;"

and there are not wanting examples in these days, of teachers whose treatment of their scholars depends very much on the way the world treats themselves. Of course under such circumstances there can be no moral training.

The notion of discipline for which we contend, will lead us to understand that a system of rewards as a means of keeping up discipline—concerning the efficacy of which there are great differences of opinion—might become a very powerful means of good. It is true that boys who work steadily in hope of a reward are not

impelled by the highest motives, but in the mean time a good habit is acquired. Through life, men are constantly being deterred from certain things through fear of punishment, and led to do others through hope of reward; and why should this not be the case in the little world of school? Of course we do not lose sight of the fact that, in themselves, actions are good or bad, according to the motive which prompts them; but what we wish to impress upon our readers is, that however good the motive, the practice will remain defective unless strengthened by habit.

If a teacher intends to establish real discipline in his school, which shall not be mere surface work, but shall elevate the moral tone of his scholars, he will begin by endeavoring to implant among them good habits; and this he will accomplish, by quietly, but firmly, inducing them to practice, day by day, what is right for them to do. For, ultimately, whatever may be their opinions, or even professions, they will do what they have been accustomed to do.

The Political Force of Ideas.

IT may truly be said of most modern nations, that their national characters have been formed on the model of some great master mind. The quiet, grave irony of Cervantes is more or less visible in every Cuban who comes to our schools for instruction. The breath of Voltaire blew into a crumbling ruin the State Church of France; and, on his cold, sarcastic, searching, sceptical writings have been formed the minds of many of the most eminent of that nation's later philosophers and statesmen. It is a question well worthy of discussion, whether Great Britain is not more indebted for her present position to the "thoughts" of Shakspeare than to the "works" of Watt. Our opinion is, that, in the trial, the poet would conquer the mechanican.

The student of history, who looks into the causes of great events, often traces them beyond the mere will of the ruler who ordained them, to the impelling force of previous "national ideas." The preaching of Peter, the hermit, sent half Christendom to Palestine. The Catholic Church would not have fallen before the act of Henry VIII. had not the ballad writers of the fifteenth century, by their ridicule of the vices of its clergy, previously prepared the minds of the people to welcome the Reformation. Ferdinand of Spain was so convinced of the force of ideas, that he forbade the Moorish song on the fall of "Alhama" to be sung by the Spanish soldiery, decreeing the penalty of death to any offender. In our own country we are probably indebted to one determined will for the war which is now raging in our midst.

Such being the force of ideas, do we not too much neglect in our public schools the cultivation and training of the faculty of imagination? Do we not lay too much stress on proficiency in the strict sciences alone, in our examinations of teachers for qualification and advancement? The mathematician who attains a certain result step by step, has rarely that free, fanciful, yet comprehensive mind which can throw light upon a subject by a sentence, and to which the past is an open book of reference! On this point we would do well to receive instruction from nature herself, from lips of mothers! Their nursery ballads are almost all extravagant fictions. A rythmical multiplication table will not answer for either mother or child.

Is it true, then, as even some philosophers teach, that utilitarianism is the chief end of human life? Is not the practical materialism of the age itself, largely indebted for its success to the ideas of the philosopher Lord Bacon? Who can say that the actual is not as visionary as the ideal? We can find the answer in the words of the bard of Avon:

> "The great globe itself,
> . . . . . shall dissolve
> And like the baseless fabric of a vision
> Leave not a rack behind. *We are such stuff*
> *As dreams are made of,—and our little life*
> *Is rounded with a sleep!*"

The Government of the Republic.

A new book.

In January, under the caption "A Book Wanted," we stated that our schools needed a textbook, which, in plain and simple language, should fully explain the nature of the government under which we live, the relations of the state to the people, the powers and duties of the federal government, and of those great municipalities which form the Union.

A number of our leading statesmen and jurists, improving upon this suggestion, have resolved to do all in their power to put this kind of information, not only in the hands of the pupils in our schools, but also in the hands of every American citizen at the domestic fireside. They believe that the permanence of our institutions will depend, in a great measure, upon the intelligence of the masses of the people in reference to their rights and duties as citizens. Proceeding to carry their resolution into effect, they have addressed a letter to Prof. W. B. Wedgwood, LL. D., in which they state that there is an increasing demand among all classes, in our own and other countries, for some reliable work which shall give a clear, comprehensive and accurate knowledge of the construction and operations of our system of government. They say that there is no work which contains this information in such form as to be accessible to the great mass of the people; they express their full confidence in the ability of the learned professor to prepare such a work as they suggest, and they extend to him an invitation to undertake its accomplishment. He has accepted the invitation, and will speedily assume the task assigned him.

Prof. Wedgwood began his legal studies after completing the college routine, and was admitted to the bar when the rules of our courts required the student to study three full years after graduation before they could be admitted.

Soon after entering his profession he made an extensive and successful effort to disseminate a knowledge of our constitution and laws among the masses of the people in all parts of our country, in which he received the unqualified approbation of the leading jurists in the several states. He prepared and published more than three thousand pages of law matter, some of which sold to the extent of over one hundred thousand copies. The degree of doctor of laws was conferred upon him by Rutgers College, under the administration of the late Hon. Theodore Frelinghuysen, and he held the position of principal professor in the law school of the University of New York for six years, resigning this position a year ago. As a scholar, as a teacher, and as an author, Prof. Wedgewood has manifested qualities which show the appropriateness of the labor in which he is about to engage. We feel fully warranted in expressing the conviction that it will be successfully prosecuted.

EDITORIAL CORRESPONDENCE.

British Museum Library,
London, May 13, 1865.

New Reading Room—Model Catalogue—Availability—Number and Character of Readers—Plan and Arrangement of the Room—Miles of Books.

Sitting in the magnificent hall which the British nation opens with generous hospitality to students not of her own domain alone, but of all nations, I am tempted to write to the Educational Monthly on the subject which here seems the most near and suggestive—the New Reading Room of the British Museum. Here I have worked every day for nearly three months, so closely engaged in my preparation to edit Ritter's work on the Holy Land, that I have visited not a single school in London, nor put myself in the way of meeting with any educators, as my leisure in Edin-

burgh so amply allowed me to do. I cannot, therefore, write what would be called an "educational" letter, but this Library is one of the greatest educational powers in the world, and the arrangements which are made for the use of students are so unique and admirable, that it seems wrong to neglect so interesting a theme.

It is unnecessary to remind the reader in more than a word, that the Library of the British Museum is one of the largest in the world, numbering over half a million of printed books, besides pamphlets, manuscripts and the like, which are literally innumerable. The number is so vast that it has never been computed. The number of volumes in the catalogue alone is 1150, each volume being in manuscript, and the size of a large ledger. The catalogue of maps, music, and manuscripts, would swell the entire number of volumes to more than two thousand. They are most conveniently arranged, and if you know the author's full name, you can look up a book in about as short a time as you could find a word in Webster's Unabridged.

But it is not of this huge library in itself that I could speak, but of that feature which distinguishes it from almost any other in the world. Paris, Berlin, Dresden, Munich, Vienna, Rome, Madrid, have their immense collections of books, some of them surpassing in magnitude this great caravansary of literature in London. But there is the same peculiarity here that we think so much of in America in selecting our President, availability. The great library in the Vatican is well-nigh worthless: each book is entombed in a little wooden case or box, and very few are allowed to turn its leaves. And it is more or less the case with all the public libraries of the Continent, they are so hedged in with restrictions that you cannot use them as you can the little collection of books on your own shelves. But it is not so here. The British Museum Library is as open and as free as the light of heaven. It is placed at the disposal of the people of all the nations; every help is given, and while you are there from nine in the morning to four in the afternoon, you fare like a prince, so sumptuous are the accommodations for students, so excellent the service of the attendants.

It is free, but it costs the people of England half a million of gold dollars yearly to sustain it; and peer and peasant are alike entitled to enjoy its advantages. The only question asked is, are you twenty-one years old; if you are, go through the form of getting a ticket, and bask in the ample fields of literature. And yet free as it is, it is not thronged. There are accommodations for three hundred "readers" at once, but I have never seen every table full. And you might think too that people might come here to lounge, to read novels, to trifle with literature. But they do not. Open as it is, these men at my side are the Authors of England. I do not scrutinize the works of my neighbors. To do that were most unmannerly; but I cannot help seeing that those who come and sit down to work by my side are hardworking men, engaged in the most recondite paths of literature; many orientalists are to be seen; many evidently engaged in historical researches; many in hunting up out-of-the-way geographical details, some prosecuting recondite researches in the province of literature proper, but never have I seen a man here who seemed to come with trivial motives, or who was not a genuine scholar. And they have one good rule which acts as an excellent safeguard. The current magazines are not issued till they are bound, and novels can not be taken out till they have been published a year. That rule keeps away the thousands who are foolishly rushing after the latest births of the press. And this is most excellently planned, for the chairs, the desks, the heating apparatus are so sumptuous and luxurious, that were it not for this rule the New Reading Room would be the greatest resort for loungers in London.

This room, which, with all its appointments, cost the British nation $450,000 in solid gold, is so simple in its main outlines that I will venture to describe it. It is an enormous dome, a hundred feet in height and a hundred and forty in diameter—one foot more than St. Peter's in Rome, twenty-eight feet more than St. Paul's in London, and only two less than that of the Pantheon of Rome, the vastest in the world. Bookcases line its circumference, up to a height of thirty feet, where the great windows begin, which give it light. The bookcases in this room alone accommodate 80,000 volumes; the others are in the adjoining buildings.

Now fancy this great circle of four hundred and twenty feet circumference. At its center is a slightly-elevated circular dais, where the attendants sit, and whence books are distributed to all the tables, which radiate, like the spokes of a wheel, towards the sides of the room. Immediately around the central dais are the two concentric tables, broken at convenient places for passage through, where stands the vast array of catalogues—those two thousand folio volumes of which I spoke. Each of the long tables for readers accommodates fourteen persons, giving five feet to a person. I can not look across my table for a screen three feet high, running the

whole length, forming what may be called the backbone of the structure. In this screen or partition are inserted my inkstand, penholder, and two ingenious adjustable racks for holding large books. Nor is this all the function of this screen; it is not a single piece of plank; it is hollow, and measures six inches through it; the top is covered with wire netting, and through it a steady, equable current of warm air is poured into the room. Was ever device so admirable? Nor is this all. Under the table runs a tube at a convenient distance from the feet, filled with warm water; this helps to warm the room, and may be a foot-warmer if I choose to use it as such. The tables are covered with enameled leather; the chairs are leather-covered, ample in size and models of their kind. In a drying-room outside, the porter carefully deposits your coat and umbrella; waiters come and go, discharging every service you may wish. A dining-room is just below, where for six pence you may have a generous slice of roast beef, and where a shilling pays for beef, potatoes, and pudding. The books in the reading-room, which can be reached from the floor, can be taken down without ceremony; for others you must send the attendants. In one word, the whole affair is as near perfect as anything in this world can be. I have at times tried to think what the most confirmed grumbler would find here to exercise his gift upon, and as yet I have failed. Here I break this letter off to go and ask a friend if he ever saw a man who could find a fault with the arrangements of the New Reading Room. "Oh, yes," he said. "And what was it, pray?" "Oh, some think that it takes too long to get the books." Well, I suppose there is a chance for grumblers there, for sometimes one must wait twenty minutes for a book, and I have known them to be half an hour; but that is the unavoidable result of the vastness of the collection. You can not walk ten miles in less than two hours and a half, however excellent,—however costly the boots you wear, or the roads you traverse. You can not find one book in this enormous collection, in a moment. There are twenty-five miles of shelves in the reading-room alone, and yet here are only 80,000 volumes—not a sixth part of the whole collection!

It would be impossible in the course of a single letter to go into some of the minor excellencies of this perfected work. I say minor, not meaning it, but only referring to what is less striking. The same ingenuity, the same skill, the same honest use of money is apparent in the new bookshelves which the readers' tables show. Take for instance this paragraph:

The shelves are formed of iron galvanized plates, edged with wainscot, and covered with russet hide leather, and having a bookfall attached. They are fitted at each end with galvanized iron, leather covered, and wadded pads placed next the skeleton bookcase framing, to prevent injury to the binding, when the books are taken out or replaced. Between these pads the skeleton framing of the cases forms an aperture by which a current of air may pass, and ventilation be kept up throughout. The shelves rest upon brass pins, the holes for which are pierced at three quarters of an inch apart, from centre to centre; but by a contrivance in crooking the shaft of the pin, which may be turned upwards or downwards, this interval is practically halved, and the position of the shelves may be altered three-eighths of an inch at a time. There are 2,750,000 of these holes!"

These are not pine-wood bookcases exactly.

But this must do. I should like to tell of the ventilation, of the Kamptulican floor, looking like leather, and giving no sound back to the tread. I never saw such a place to study. There is no noise, all are hard at work, the atmosphere is one which stimulates to thought, and to industry, and to noble achievement. England had done many, many noble things, but surely she has never done one more worthy of her wealth, her culture, and her civilization, than the stablishment of this princely library.

W. L. G.

MISCELLANY.

——The Egyptian Chronology, which has led so many Egyptian scholars, such as Bunsen and Lepsius, to put back the date of creation indefinitely, is likely to be brought within reasonable limits. M. Mariette, a distinguished French explorer, has discovered a tablet in a disentombed temple at Memphis, with a long record of royal names. It places in direct succession kings of the fifth and tenth dynasties, and the twelfth and eighteenth, omitting all the intermediate ones, like the tablet of Abydos. M. Mariette confesses that it seems to prove that the intermediate ones must have been

contemporaneous monarchs, or kings of other parts of Egypt, and that this deducts 1836 years from the supposed duration of the Egyption kingdom. As he has been an advocate of the long chronology, this admission has great weight.

——In the preparation and purification of Magnesium, mixed solutions of chloride of potassium and chloride of magnesium are evaporated to dryness, and thus a non-aqueous double salt is obtained, which, when reduced with soda in an iron crucible, yields large quantities of magnesium. It may be purified (though for photographic purposes this would be superfluous, and enhance the cost of production considerably), by distillation in an iron apparatus filled with hydrogen.

——Starch sugar has been converted into a sweet, hard, granular condition, in which it resembles ordinary sugars, by Mr. F. Anthon.

——Prof. Hoffman has patented in England the process of manufacturing a new color, obtained from iodine, which affords several varieties of violet.

—— A short time since a paper was read to the Society of Antiquaries upon an ancient papyrus, which had been, after much difficulty, deciphered. It is a story of 300 lines, relating the adventures of an Asiatic wanderer, about B. C. 2400. This person flees from the court of King Ammenemoo I. into Ethiopia, where he is hospitably entertained, marries the daughter of a chief, and becomes a rich man. In his old age he longs to return to Egypt, and writes to the King for pardon. The King returns a gracious answer, and a copy of his letter is given. The adventurer describes his return to Egypt; the awe with which the King's presence inspired him; the mistaken zeal of the courtiers, who fancying that the King is about to punish the fugitive, cry out that he is guilty; the turning of the tables by the King, who pronounces him innocent, instals him in a splendid house with a handsome pension, continues to smile upon him till the day of his death, and builds him a magnificent tomb.

——About fifteen years ago, it happened in a certain country of Europe, that the inspector-general of garrisons, while visiting a provincial town, observed a sentinel stationed at a little distance outside the walls, keeping guard over some ruined buildings in the suburbs. The general inquired of the sentinel with some curiosity, why he was posted there. The sentinel referred him to his sergeant. The sergeant had nothing to say but that such were the orders of his lieutenant. The lieutenant justified himself under the authority of the captain-commandant of the garrison for the standing order in question, the commandant informed the inspector-general, with much seriousness, that his predecessor in office had handed down to him the custom as one of the military duties of the place. A search was immediately instituted in the archives of the municipality, the result of which was to obtain satisfactory proof that, for the last seventy years, a sentinel had always stood over the ruined buildings in the same manner. With awakened interest and curiosity, the general returned to the capital. He there set on foot a more elaborate investigation among the State documents of the minister of war. After long delay it was at last discovered that the ruined building of the faubourg had been, in 1720, a storehouse for mattrasses belonging to the garrison, and that in the course of that summer it became desirable to repaint the door. While the paint was wet, a guard was placed outside to warn those who went in and out; but before the paint was dry, it came to pass that the officer on duty was dispatched on a mission of importance, and left the town without remembering to remove the sentinel. For a hundred and thirty years a guard of honor has constantly remained over the door—a sacred and inviolable tradition, but one which represented at bottom no higher idea than the idea of wet paint.

—— A natural curiosity, which completely puzzles naturalists and geologists, is now in possession of Isaac S. Josephi, the wholesale jeweler on Washington street, San Francisco. It is an irregular hexagonal quartz crystal, about one inch in diameter and two inches in length, pointed at one end and broken squarely off at the base. Within the body of the crystal, rising from the base like a miniature mountain, and occupying about half the entire length of the stone, is a mass of beautifully crystalized gold, silver and copper, each metal distinctly defined, and all embedded in the stone—which is as clear as glass—in exactly the style of the flowers and other objects in a glass paper-weight. This curious specimen of the handiwork of nature was found by a miner at Gold Gulch, Calaveras county, some four years ago, and has been carried around in his pocket ever since, until some two months ago, when it was purchased by the superintendent of a copper mine, and sent to the present possessor as a curiosity. Geologists who have examined it declare that nothing of the kind has ever been seen or heard of before, and are utterly at a loss to account for its formation.

—— The smallest natural magnet generally possesses the greatest proportion of attractive power. The magnet worn by Sir Isaac Newton in his ring weighed only three grains; yet it was able to take up 746 grains, or nearly 250 times its own weight, whereas magnets weighing above two pounds seldom lift more than five or six times their own weight. Iron is the only substance principally attracted by the magnet. The degree of magnetic attraction depends on the strength of the magnet itself, the weight and shape of the iron presented to it, the magnetic or unmagnetic state of the body, and the distance between them. All iron bars standing erect or fixed perpendicularly (such as the iron railings before houses) are magnetic, the north pole being at the bottom and the south at the top. It is also a curious fact that the uppermost part of the iron ring round a carriage wheel attracts the north end of the magnet, and is consequently a south pole, while the lower part of the same iron, in contact with the ground, attracts the south end of the needle, and is therefore a north pole. Turn the wheel round half a circle, and the poles immediately become reversed. The power of magnetic attraction resides wholly in the surface of the iron bodies, and is independent of the mass. An empty bombshell will attract as strongly as a solid sphere of the same material. The cutters in gun-boring become magnetic in consequence of being continually rubbed in the same direction.

—— The French journals report that M. Gaunal has succeeded in obtaining crystals having all the properties of diamonds, through the mutual reaction of phosphorus, water and bisulphid of carbon, on each other, for the space of fifteen weeks. The crystals were found to be so hard that no pick was capable of acting on them; they cut glass like ordinary diamonds, and scratch the hardest steel; in brilliancy and transparency they equal the best jewels.

CURRENT PUBLICATIONS.

MANY persons regard Latin as an irksome study having little remunerating value. Latin, nevertheless, has important advantages in education; it is, not only a most excellent training for memory, but is the very best exposition of the general principles of grammar, illustrating the inflections of words, and the nice shades of thought, developed by prefixes and terminations; and it gives an anerring key to the meanings of those more elegant and expressive terms used by our best writers. Words derived from the Latin add to the Anglo-Saxon a richness and delicacy of expression that all scholars appreciate, and they now form a much larger proportion of our language than those not familiar with the classics would suppose. Education is thus imperfect without some knowledge of this language and its derived words.

But while these advantages of Latin are admitted, the irksomeness of its primary studies must be also, particularly in the old systems of teaching it, in which students were kept for months poring over a Latin grammar, without the facilities of seeing or applying the principles explained. A decided improvement in this respect took place when "First Books" in Latin appeared, combining grammar, reading and translation in each lesson. But the "Latin Readers" and the "First Reading" books still have defects—in the monotonous character of the pieces, or the incongruous selections from various writers, apparently taken at random—detached sentences that awaken no interest, or paragraphs which change from one subject to another without finishing any; and in the books of modern times, as *Historia Sacra*, *Viri Romæ*, the style is so dull and staid that students seldom feel their interest so much excited in the narrative as to pursue it with zest. In reading the new work of Professor Brooks,[1] of Baltimore—the *Viri Americæ*, the reader, therefore, cannot fail to be struck with the difference in the style between it and the first Latin books of his boyhood days. Opening the book at random, we find from "JOANNES PAULUS JONES," p. 120, the following spirited scene:

"Dum naves appropinquant, frequentia spectantium magna, studio summo, implet caput Flamboroughense. Dies vesperascit, sol descendit et, crepusculo in noctem tenebrascente, luna, orbe pleno surgens, radios argenteos diffundit. Subitò supra pontum rubescit fulgor, ac reboant tonitrua, dum coëunt naves hostiles in primo congressu. Tormenta, toto latere, ex ordine celeriter emittuntur, exoriturque clamor virorum fragorque sclopetorum.

"Pugna desævit; quâque emissione tormentorum tigna dilacerantur, fissuræque per corpora navium aperiuntur, ruuntque undæ per fora-

(2) BROOKS' VIRI ILLUSTRES AMERICÆ. New York; Barnes & Burr. Price $1.50.

mina, profluitque sangnis super stegas lubricas, dum fumo involuti nautæ deprœliantur sub incertam lunam. Decies ardet Richardus, decies flammæ extinguuntur; interdum instat sidere, donec ab antliâ levatus sit; sed usque præfectus ejus invictus prœlium sustinet. Tandem Serapis incenditur, flammæque circa malos ad cœlum exsuperant coruscantque crepitantque; ubi navarchus ejus, igne et marte subactus, victorem agnoscit vexillumque submittit.

"Ubi illuxit, navis Richardus jacuit collapsa glandibus perforata, inflammata ac prope depressa. Per diem et noctem sustentata est; sed subjecta et volutata ab undis, in momentum vacillavit, ultimùmque ab mari hausta est cum fortibus defunctis, qui super stegas periêrant. Non fuisset feretrum melius aut sepulcrum gloriosius.

Now there is a fire, a graphicness in this description of the rencounter, that will delight the young and the old. True, the spirits of good old Cicero and Horace might be perplexed about the exact modern meaning of such words as *tormenta*, *sclopetorum*, etc., but the style can not fail to interest, and make students delighted with Latin reading, and encourage them onward. If all the Latin first-reading had this excellence, we would hear but little complaint of its irksomeness.

Examining the book more fully, we find another interesting feature. It embraces the lives of the prominent men of America, Columbus to Andrew Jackson, arranged in chronological order, and thus forms, as it were, a biographical history of the country. Hence the study of the "*Viri Americæ*" can not fail to impress the memory with the principal events in our history, and to imbue the heart with enobling sentiments of patriotism and virtue. This is, indeed, one of the peculiar characteristics of the classical works of Professor Brooks, especially, we remember, in his Cæsar and Ovid. A late reviewer of these works observes: "Professor Brooks strives to beget a study of the text of his author, by pointing out the literary beauties, and by furnishing parallelisms from our own literature and the Bible. He would develop, not only mere verbal or grammatical utility, but also cultivate the taste and the moral sense of classical study." This, certainly, is no small advantage of Latin as a discipline for the minds of children. The late Bishop Meade, in his great work on "The Bible and the Classics," says: "If all the teachers of youth, and editors of the classics, had but followed [this] example, then classical education, instead of ministering to skepticism and immorality, would have been a useful handmaid to Christianity." Latin and mathematics are admirably adapted to form a well-balanced mind. Latin is, however, better suited to some minds, and, generally and more especially, to the minds of females.

A new edition of a teacher's manual[2] has appeared. It is not a book of much labor or erudition. The teacher's vocation, means of professional improvement, oral teaching, object lessons, school examinations and exhibitions, and similar topics, are treated in the form of letters, in plain, intelligible language. No new system and few new ideas are advanced, and the experienced teacher would find little of practical importance. To many persons, however, it would be interesting, and would perhaps be more useful than some pretentious and labored treatise.

Cleveland's Compendium[3] of English Literature was given to the public several years ago, and has been too extensively used and too well appreciated to require special praise. And as the proprietors of the MONTHLY now issue the valuable series to which it belongs, we are tempted to pass the book with stinted approbation, as we have often done under similar circumstances, knowing that in commending our publishers we might seem to be patting ourselves on the head. But the works of Charles D. Cleveland are really too meritorious to be slighted on such considerations. The Compendium in its improved form is really a remarkable book. Solid, voluminous, and carefully compiled at first, the additions and revision have made it the best collection of the kind which has been prepared. Few who have had no experience in bookmaking can form an approximative estimate of the time and labor necessarily expended on the work. The selections are in prose and in poetry, illustrating the principal writers of five centuries, and are annotated, indexed, and arranged with the conscientious accuracy which distinguishes the author. Unusual pains have been taken in the typographical execution of the work, and it is issued in the neat, handsome and durable form which it merits.

The Teacher's work would prove far pleasanter were his pupils properly trained at home, from their infancy. Warren Burton's new book on the "Observing Facul-

(2) THE TEACHER'S ASSISTANT, or Hints and Methods in School Discipline and Instruction; being a series of familiar letters to one entering upon the teacher's work. By CHARLES NORTHEND, A.M., author of "The Teacher and Parent," etc. Boston: Crosby & Ainsworth. 12mo, pp. 353; $1.75.

(3) COMPENDIUM OF ENGLISH LITERATURE, Chronologically Arranged, from Sir John Mandeville to William Cowper. Consisting of Biographical Sketches of the authors, selections from their Works, with Notes, explanatory and illustrative, directing to the best editions, and to various criticisms. Designed as a textbook for the highest classes in schools, and for junior classes in colleges, as well as for private reading. By CHARLES D. CLEVELAND. New York and Philadelphia: Schermerhorn, Bancroft & Co. 12mo, pp. 776; $2.50.

ties" happily shows what can and ought to be done at home, and how it should be done. Those parents who properly encourage the child's first cravings after knowledge are really exercising tutorships and professorships as important as any in our colleges. Mr. Burton's book[4] contains less than two hundred pages, and yet we know no work so rich in valuable hints and suggestions. We are not given to the use of strong terms in praising books, but we can not avoid insisting that every parent and teacher should own and study this little volume. Its universal use could not fail to be of inestimable advantage.

We have had many works professing to contain valuable information concerning methods of instruction. Too many of these have been of inferior character and only a few have been sufficiently thorough or practical. It, therefore, gives us real pleasure to receive the long promised work of Prof. Wickersham,[5] in which we recognize a nearer approach to a properly scientific treatment of the various questions. The introduction, containing 100 pages, is elaborately written and full of facts alike interesting and important. In this portion of the work the author makes some strong points while urging that teachers need special preparation for their calling. He regards teaching, as a profession, equal in importance to those of medicine, law, and theology, and shows that its object is to impart instruction not merely that the pupil may acquire means to feed or clothe himself, but also that he may be made more useful to his fellow men. Having established the importance of the profession he insists, with great propriety, on the necessity for special preparatory schools, and fortifies his position by references to the teachers of Prussia, France, and Great Britain. We regret that our limited space will not permit us to carefully discuss the merits of this work. It is characterized by wonderful unity of purpose and completeness of plan. No branch of study seems to have been overlooked; for instruction in each, some method is given. The whole treatise gives evidence of careful preparation. The style is very concise. By those who have the honor of the profession at heart and who desire to be faithful in discharging their duties toward the pupil, this work will be welcomed more heartily than any similar treatise which has appeared.

Our clerical friend, the Vicar of Wakefield, will never grow old. We have just had a half-hour's chat with him, and found him as genial and loquacious as when, a quarter of a century ago, we learned incidentally, through him, that the "cosmogony . . . of the world had puzzled philosophers of all ages," and that "Sanchoniathon, Manetho, Berosus and Ocellus Lucanus, had attempted it in vain." The Vicar, at this time,[6] is clad in dark vellum cloth, and his appearance is altogether unexceptionable.

The Phrenological publications of Messrs. Fowler & Wells have long been known throughout our country, and it may almost be said, throughout the world. During several years they have directed their attention, not only to subjects of a similar nature, but to various practical and useful topics. Of these the Handbook for Home Improvement[7] is most directly connected with educational matters. It will seem to many persons that a book showing how to write, how to talk, how to behave, and how to do business, is, in this enlightened day, a little behind the age. Such persons do not reflect that the world is repeopled every thirty years, and that a thousand years hence there will be myriads of tyros blundering with their A B C. To persons who have had little opportunity for systematic study, the Handbook, simple and inartistic as it is in execution, will prove both interesting and serviceable

The Pulpit and Rostrum continues to present from time to time the most interesting productions of the literary and forensic leaders of our eventful age. Devoted to no restricted range of thought, it is a reflex of the most gifted minds now influencing popular action. The latest numbers of the series contains the Oration of Hon. George Bancroft, at the Obsequies of the late President; the Funeral Ode, by Bryant; the Emancipation Proclamation, and the Inaugural Address of March, 1865. Accompanying these is a well-executed and remarkably accurate engraving of the lamented President, forming a striking contrast to the rude portraits which at this time everywhere meet the eye.

(4) THE CULTURE OF THE OBSERVING FACULTIES IN THE FAMILY AND THE SCHOOL; or Things about House, and how to make them Instructive to the Young. By WARREN BURTON, Author of "The District School as it Was," etc. New York: Harper & Brothers. 75 cents.

(5) METHODS OF INSTRUCTION; that part of the Philosophy which treats of the nature of the several branches of knowledge, and the methods of teaching them according to that nature. By JAMES PYLE WICKERSHAM, A. M., Principal Penn. State Normal School, etc. Philadelphia, J. B. Lippincott & Co. 12mo; $1.75.

(6) THE VICAR OF WAKEFIELD. By OLIVER GOLDSMITH. New York: Frank H. Dodd. Pocket edition, gilt top; pp. 242: $1.50.

(7) HANDBOOK FOR HOME IMPROVEMENT, comprising How to Write, How to Talk, How to Behave, How to Do Business. New York: Fowler & Wells. Large 12mo; $2.25.

(8) THE PULPIT AND ROSTRUM; Pamphlet Serial. Sermons, Orations, Popular Lectures, etc.; No 34. New York Obsequies of the late President. New York: Schermerhorn, Bancroft & Co. With Portrait, 25 cents.